

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows. Any other difference between the claims below and the previous state of the claims is unintentional and in the nature of a typographical error.

1. (Currently Amended) An ocular scleral prosthesis comprising:

an elongated body adapted to be implanted in an elongated pocket surgically formed within scleral tissue of an eye, ~~the pocket being formed~~ in a zone of a globe of the eye exterior to a ciliary body of the eye, the pocket having (i) a base comprised of inner layers of the scleral tissue, (ii) a flap formed from outer layers of the scleral tissue, (iii) an anterior margin and (iv) a posterior margin,

wherein the elongated body is non-circular and has a first free end and a second free end,

wherein the elongated body also has a first surface and a second surface opposite the first surface, the first surface and the second surface being adapted to respectively contact the base and the flap of the scleral pocket when the prosthesis is implanted, [[and]]

wherein one of the first and second surfaces is planar, and

wherein the other of the first and second surfaces comprises a ridge or a crest separated from the planar surface by a distance sufficient to elevate the flap relative to the base and exert outwardly directed traction on at least the anterior margin of the pocket when the prosthesis is implanted in order to at least one of: increase a working distance of a ciliary muscle of the eye and increase an amplitude of accommodation of the eye.

2.-60. (Cancelled).

61. (Currently Amended) A prosthesis adapted for contact with a sclera of an eyeball, the prosthesis comprising:

an elongated body having a first free end and a second free end, wherein the first free end is more distal from the second free end than from any other portion of the elongated body, and wherein the first and second free ends are adapted to be unattached to any other prosthesis when the prosthesis is implanted, the elongated body including a first surface and a second surface opposite the first surface, the first surface and the second surface each adapted to contact ~~[[ing]]~~ a portion of the sclera when the prosthesis is implanted; and

means for expanding the contacted sclera, when the prosthesis is implanted, to increase an effective working distance of a ciliary muscle of the eyeball;

wherein one of the first and second surfaces is planar, and the means for expanding comprise a ridge or a crest on the other of the first and second surfaces.

62. (Cancelled).

63. (Currently Amended) The prosthesis set forth in Claim 61 wherein at least one of the first surface and the second surface is generally smooth and is adapted to contact ocular tissue within a pocket surgically formed within the sclera of the eyeball when the prosthesis is implanted.

64. (Currently Amended) The prosthesis set forth in Claim 61 wherein the prosthesis is at least one of generally rectangular, curved, and elongated.

65. (Previously Presented) The prosthesis set forth in Claim 61 wherein at least one of the first surface and the second surface comprises an anterior edge and a posterior edge, and the ridge or crest has a maximum height above the elongated body at one of: (i) a location intermediate between the anterior edge and the posterior edge, (ii) a location less than halfway from the anterior edge to the posterior edge, and (iii) a location at the anterior edge.

66. (Previously Presented) The prosthesis set forth in Claim 61 wherein the elongated body comprises a planform having a longer first dimension and a shorter second dimension.

67. (Cancelled).

68. (Previously Presented) The prosthesis set forth in Claim 66 wherein the ridge or crest extends along at least a portion of the first dimension.

69. (Previously Presented) The prosthesis set forth in Claim 66 wherein the first dimension is about five (5) millimeters and the second dimension is about two (2) millimeters.

70. (Previously Presented) The prosthesis set forth in Claim 61 wherein the prosthesis is made of at least one of a physiologically acceptable metal, a ceramic material, a synthetic resin, a reinforced composite material, and a flexible material.

71. (Previously Presented) The prosthesis set forth in Claim 61 wherein the prosthesis is provided with an internal cavity.

72. (Previously Presented) The prosthesis set forth in Claim 71 wherein the internal cavity is filled with at least one of a fluid and a gel.

73. (Previously Presented) The prosthesis set forth in Claim 71 wherein the internal cavity is filled with at least one of water, a saline solution, an oil, silicone, collagen, and gelatin.

74. (Currently Amended) A prosthesis for surgical implantation into a pocket in a sclera of an eyeball, the prosthesis comprising an elongated body having a first free end and a second free end, both ends adapted to be free of contact with any other prosthesis when the prosthesis is implanted, wherein the elongated body has no portions that are spaced apart from each other further than the first and second free ends,

wherein the elongated body includes a first surface and a second surface, the first surface and the second surface being adapted to contact the sclera when the prosthesis is implanted, wherein one of the first and second surfaces is planar and the other of the first and second surfaces comprises a ridge or a crest separated from the planar surface so as to apply an outward force on the scleral pocket when the prosthesis is implanted to elevate an overlying portion of the sclera to increase an effective working distance of a ciliary muscle of the eyeball.

75. (Previously Presented) The prosthesis set forth in Claim 74 wherein the elongated body is generally rectangular.

76. (Previously Presented) The prosthesis set forth in Claim 74 wherein the elongated body is arched along a long dimension thereof.

77. (Previously Presented) The prosthesis set forth in Claim 74, wherein at least one of the first surface and the second surface comprises an anterior edge and a posterior edge, and the ridge or crest has a maximum height located intermediate between the anterior edge and the posterior edge.

78. (Previously Presented) The prosthesis set forth in Claim 74, wherein at least one of the first surface and the second surface comprises an anterior edge and a posterior edge, and the ridge or crest has a maximum height located between the anterior and posterior edges less than halfway from the anterior edge toward the posterior edge.

79. (Currently Amended) The prosthesis set forth in Claim 74, wherein the elongated body has a planform having a first dimension longer than a second dimension, wherein at least one of the first surface and the second surface is adapted to contact [[s]] the sclera along the second dimension when the prosthesis is implanted.

80. (Currently Amended) A scleral prosthesis comprising a body adapted for contact with a sclera of an eye in a region of a ciliary body when implanted, the body being non-circular and having a first free end, a second free end, and a ridge or a crest projecting above surrounding portions of the body, the ridge or crest located between first and second edges of the body and extending along at least a majority of a length of the body from the first free end to the second free end, the ridge or crest ~~having a prescribed shape operating~~ adapted to exert a force with respect to the contacted eye to expand the sclera in the region of the ciliary body when the prosthesis is implanted;

wherein the ridge or crest is configured, when the prosthesis is implanted, to at least one of: increase a working distance of a ciliary muscle of the eye and increase an amplitude of accommodation of the eye.

81. (Currently Amended) The scleral prosthesis set forth in Claim 80 wherein the ridge or crest is configured to exert ~~[[s]]~~ the force to increase ~~[[a]]~~ the working distance of ~~[[a]]~~ the ciliary muscle of the eye.

82. (Currently Amended) The scleral prosthesis set forth in Claim 80 wherein the ridge or crest is configured to exert ~~[[s]]~~ the force to increase ~~[[an]]~~ the amplitude of accommodation of the eye.

83. (Previously Presented) The scleral prosthesis set forth in Claim 80 wherein the body further has an outer surface that is adapted to contact ocular tissue within a pocket surgically formed within the sclera of the eye.

84. (Previously Presented) The scleral prosthesis set forth in Claim 80 wherein the prosthesis has a generally rectangular planform.

85. (Currently Amended) The scleral prosthesis set forth in Claim 83 wherein the body further has a base adapted to contact scleral tissue between anterior and posterior margins of the pocket when the prosthesis is implanted within the pocket, the base adapted to contact ~~[[ing]]~~ the scleral tissue along a width of the base when the prosthesis is implanted.

86. (Currently Amended) The scleral prosthesis set forth in Claim 80 wherein the body further comprises a planform having a first dimension longer than a second dimension, a first surface and a second surface, and a height, the ridge or crest formed by or projecting from the first surface, the second surface adapted to contact ~~[[ing]]~~ scleral tissue across the planform when the prosthesis is implanted within a pocket surgically formed within the sclera of the eye.

87. (Previously Presented) The scleral prosthesis set forth in Claim 86 wherein the second surface is planar.

88. (Currently Amended) The scleral prosthesis set forth in Claim 86 wherein the body comprises the ridge, the ridge extending [[s]] along at least a portion of the first dimension of the body and [[is]] formed by an intersection of a first portion of the first surface that extends substantially along the height of the body with a second portion of the first surface that slopes across both the planform and the height.

89. (Previously Presented) The scleral prosthesis set forth in Claim 86 wherein the first dimension is about five millimeters and the second dimension is about two millimeters.

90. (Previously Presented) The scleral prosthesis set forth in Claim 80 wherein the prosthesis is made of at least one of a physiologically acceptable metal, a ceramic material, a synthetic resin, a reinforced composite material and a flexible material.

91. (Withdrawn) The scleral prosthesis set forth in Claim 80 wherein the prosthesis is provided with an internal cavity.

92. (Withdrawn) The scleral prosthesis set forth in Claim 91 wherein the internal cavity is filled with at least one of a fluid and a gel.

93. (Withdrawn) The scleral prosthesis set forth in Claim 91 wherein the internal cavity is filled with at least one of water, a saline solution, an oil, silicone, collagen, and gelatin.

94. (Currently Amended) A scleral prosthesis comprising a body adapted for contact with a sclera of an eye in a region of a ciliary body, the body being non-circular and having:

(i) a base member having an elongated planform with a major dimension, a minor dimension, an inner major surface and a planar outer major surface, the body being adapted to contact ocular tissue of the eye in the region of the ciliary body when the prosthesis is implanted, and

(ii) a ridge or crest member on the inner major surface of the base member and along the major dimension of the base member and spaced apart from edges of the base member, wherein the ridge or crest member is adapted, when the prosthesis is implanted in the eye, applies to apply a force to the contacted ocular tissue to thereby expand the sclera in the region of the ciliary body,

wherein the ridge or crest member is adapted to apply the force to the contacted ocular tissue when the prosthesis is implanted at a location spaced apart from any other prosthesis; and

wherein the ridge or crest member is configured, when the prosthesis is implanted, to at least one of: increase a working distance of a ciliary muscle of the eye and increase an amplitude of accommodation of the eye.

95. (Currently Amended) The scleral prosthesis set forth in Claim 94 wherein the ridge or crest member is configured, when the prosthesis is implanted in the eye, ~~exerts to~~ exert the force to increase ~~[[a]]~~ the working distance of ~~[[a]]~~ the ciliary muscle of the eye.

96. (Currently Amended) The scleral prosthesis set forth in Claim 94 wherein the ridge or crest member is configured, when the prosthesis is implanted in the eye, ~~exerts to~~ exert the force to increase ~~[[an]]~~ the amplitude of accommodation of the eye.

97. (Previously Presented) The scleral prosthesis set forth in Claim 94 wherein the outer major surface is adapted to contact the ocular tissue within a pocket surgically formed within the sclera of the eye.

98. (Previously Presented) The scleral prosthesis set forth in Claim 94 wherein the prosthesis is generally rectangular.

99. (Currently Amended) The scleral prosthesis set forth in Claim 94 wherein the base member has an anterior edge and a posterior edge, wherein the ridge or crest member is located spaced apart from the anterior edge.

100. (Withdrawn – Currently Amended) The scleral prosthesis set forth in Claim ~~[[87]]~~ 86 wherein the second surface is curved along the first dimension.

101. (Currently Amended) The scleral prosthesis set forth in Claim 86 wherein the ridge or crest extends along at least a portion of the first dimension of the body.

102. (Currently Amended) The scleral prosthesis set forth in Claim ~~[[86]]~~ 94 wherein the ~~first~~ major dimension is about five millimeters and the ~~second~~ minor dimension is about two millimeters.

103. (Currently Amended) The scleral prosthesis set forth in Claim ~~[[80]]~~ 94 wherein the prosthesis is made of at least one of a physiologically acceptable metal, a ceramic material, a synthetic resin, a reinforced composite material and a flexible material.

104. (Withdrawn – Currently Amended) The scleral prosthesis set forth in Claim ~~[[80]]~~ 94 wherein the prosthesis is provided with an internal cavity.

105. (Withdrawn) The scleral prosthesis set forth in Claim 104 wherein the internal cavity is filled with at least one of a fluid and a gel.

106. (Withdrawn) The scleral prosthesis set forth in Claim 104 wherein the internal cavity is filled with at least one of water, a saline solution, an oil, silicone, collagen, and gelatin.

107. (Currently Amended) The prosthesis set forth in Claim [[76]] 94 wherein the ~~elongated~~ body is curved along the ~~long~~ major dimension.

108. (Withdrawn – Currently Amended) A scleral prosthesis for implantation into an eye, the prosthesis comprising:

an arcuate base having a planar first surface and a length that forms less than a complete circle; and

a ridge or a crest on a second surface of the base, the ridge or crest adapted to exert outward force on an overlying portion of a sclera of the eye without contacting any other prosthesis when the prosthesis is implanted;

wherein the ridge or crest is configured, when the prosthesis is implanted, to at least one of: increase a working distance of a ciliary muscle of the eye and increase an amplitude of accommodation of the eye.

109. (Currently Amended) A prosthesis that contacts a sclera of an eyeball, the prosthesis comprising a non-circular body having a first free end and a second free end spaced apart from the first free end such that no portion of the body overlaps any other portion of the body, the body also having a planform that is adapted to expand [[s]] the contacted sclera and that includes top and bottom surfaces, one of the top and bottom surfaces being planar and the other of the top and bottom surfaces comprising [[es]] a ridge or a crest separated from the planar surface so as to increase an effective working distance of a ciliary muscle of the eyeball, wherein each of the first and second free ends lacks a mechanism for coupling to an end of another prosthesis.

110. (Currently Amended) The prosthesis set forth in Claim 109 wherein the top surface is adapted to contact [[s]] ocular tissue within a pocket surgically formed within the sclera of the eyeball.

111. (Currently Amended) The prosthesis set forth in Claim 110 wherein the top surface is circumferentially shaped and ~~exerts~~ is adapted to exert an outward force on the scleral pocket to elevate a portion of the sclera attached thereto to increase the effective working distance of the ciliary muscle of the eyeball.

112. (Previously Presented) The prosthesis set forth in Claim 110 wherein the body further comprises a means for stabilizing the prosthesis within the scleral pocket.

113. (Currently Amended) The prosthesis set forth in Claim 112 wherein the stabilizing means includes the bottom surface that ~~contacts~~ is adapted to contact ocular tissue within the scleral pocket.

114. (Previously Presented) The prosthesis set forth in Claim 113 wherein an ocular tissue contact area of the bottom surface of the body is at least substantially equal to an ocular tissue contact area of the top surface of the body.

115. (Currently Amended) The prosthesis set forth in Claim 112 wherein the stabilizing means includes at least one of the first end and the second end that ~~fixes~~ is adapted to fix the body within the scleral pocket.

116. (Previously Presented) The prosthesis set forth in Claim 66 wherein the elongated body is curved along the first dimension.

117. (Withdrawn) The ocular scleral prosthesis set forth in Claim 1 wherein:
the elongated body comprises a planform having a longer first dimension and a shorter second dimension; and
the elongated body is curved along the first dimension.